

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (original) A process to load a drug into a cross-linked polymer, comprising the following steps:

- a. pre-treating said cross-linked polymer with a supercritical fluid;
- b. contacting said pre-treated cross-linked polymer with a supercritical fluid containing the drug dissolved therein;
- c. removing the supercritical fluid, thereby causing the drug to precipitate inside the cross-linked polymer.

Claim 2. (original) Process according to claim 1, wherein in step a., the cross-linked polymer is maintained in contact with the supercritical fluid for a time comprised between 1 minute and 6 hours.

Claim 3. (currently amended) Process according to ~~claims 1-2~~ claim 1, wherein in step a. , the cross-linked polymer is maintained in contact with the supercritical fluid for a time comprised between 5 minutes and 4 hours.

Claim 4. (currently amended) Process according to ~~claims 1-3~~ claim 1, wherein in step b. , the pre-treated cross-linked polymer is maintained in contact with the supercritical fluid for a time comprised between 2 minutes and 48 hours.

Claim 5. (currently amended) Process according to ~~claims 1-4~~ claim 1, wherein in step b. , the pre-treated cross-linked polymer is maintained in contact with the supercritical fluid for a time comprised between 10 minutes and 12 hours.

Claim 6. (currently amended) Process according to ~~claims 1-5~~ claim 1, wherein the contact of the cross-linked polymer with the supercritical fluid is effected in static and/or dynamic conditions.

Claim 7. (currently amended) Process according to ~~claims 1-6~~ claim 1, wherein said supercritical fluid is chosen among carbon dioxide, ethylene, propylene, chlorofluorocarbon, nitrous oxide, and mixtures thereof.

Claim 8. (currently amended) Process according to ~~claims 1-7~~, claim 1, wherein said cross-linked polymer is chosen among cross-linked polyvinylpyrrolidone, cross-linked cellulose derivatives, starch and its derivatives, cyclodextrins and their derivatives, cross-linked polystyrene, cross-linked acrylic polymers, and mixtures thereof.

Claim 9. (currently amended) Process according to ~~claims 1-8~~ claim 1, wherein further characterised in that the thus loaded drug is present in the cross-linked polymer in high amorphous and nanocrystalline fraction.

Claim 10. (currently amended) A method to increase the drug-loading capacity of a cross-linked polymer, ~~consisting in~~ comprising treating said cross-linked polymer with a supercritical fluid not containing any drugs.

Claim 11. (original) Method according to claim 10, wherein the cross-linked polymer is maintained in contact with the supercritical fluid for a time comprised between 1 minute and 6 hours.

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PRELIMINARY AMENDMENT

Claim 12. (currently amended) Method according to ~~claims 10-11~~ claim 11, wherein the cross-linked polymer is maintained in contact with the supercritical fluid for a time comprised between 5 minutes and 4 hours.

Claim 13. (currently amended) Method according to ~~claims 10-12~~ claim 10, wherein the contact of the polymer with the supercritical fluid is effected in static and/or dynamic conditions.

Claim 14. (currently amended) Method according to ~~claims 10-13~~, claim 10, wherein the supercritical fluid is chosen among carbon dioxide, ethylene, propylene, chlorofluorocarbon, nitrous oxide, and mixtures thereof.

Claim 15. (currently amended) Method according to ~~claims 10-14~~ claim 10, wherein the cross-linked polymer is chosen among cross-linked polyvinylpyrrolidone, cross-linked cellulose derivatives, starch and its derivatives, cyclodextrins and their derivatives, cross-linked polystyrene, cross-linked acrylic polymers, and mixtures thereof.

Claim 16. (currently amended) Modified cross-linked polymer, having enhanced drug-loading properties, obtainable from a polymer selected from the group consisting of cross-linked polyvinylpyrrolidone, cross-linked cellulose derivatives, starch and its ~~derivatives~~ derivatives, cyclodextrins and their derivatives, cross-linked polystyrene and mixtures thereof by treating the sole cross-linked polymer with a supercritical fluid not containing any drug.

Claim 17. (previously presented) Modified cross-linked polymer according to claim 16, obtainable by treating the sole cross-linked polymer with the supercritical fluid for a time comprised between 1 minute and 6 hours.

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Claim 18. (currently amended) Modified cross-linked polymer according to ~~claims 16 or 17~~
claim 17, obtainable by treating the sole cross-linked polymer with the supercritical fluid for a
time comprised between 5 minutes and 4 hours.

Claim 19. (currently amended) Modified cross-linked polymer according to ~~claims 16-18~~
claim 16, wherein the supercritical fluid is chosen among carbon dioxide, ethylene, propylene,
chlorofluorocarbon, nitrous oxide, and mixtures thereof.

Claim 20. (currently amended) Modified cross-linked polymer according to ~~claims 16-19~~
claim 16, loaded with a drug.

Claim 21. (currently amended) Pharmaceutical composition containing ~~the~~ a modified cross-
linked polymer according to ~~of~~ claim 20.